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L5 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1998:398170 CAPLUS
DOCUMENT NUMBER: 129:64316
TITLE: **Granular pesticidal** composition
INVENTOR(S): Inoue, Masao; Ogawa, Masao; Nakamura, Hiroshi
PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd., Japan
SOURCE: Eur. Pat. Appl., 13 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
INT. PATENT CLASSIF.:
MAIN: A01N025-26
CLASSIFICATION: 5-4 (Agrochemical Bioregulators)
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 847691	A1	19980617	EP 1997-121659	19971209
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 10167904	A2	19980623	JP 1996-330699	19961211
PRIORITY APPLN. INFO.:			JP 1996-330699	19961211

ABSTRACT:
This invention relates to a **granular pesticidal** compn. ***coated*** with a **thermosetting** resin, such as a polyurethane. Release of the **pesticidal** active ingredient is controlled by appropriately changing the kind and amt. of a **thermosetting** resin, depending on the use, and durability of effect of the **pesticidal** active ingredient is shown.

SUPPL. TERM: **coated pesticide granule**
INDEX TERM: **Pesticide** formulations
(**coated granular pesticides**
)
INDEX TERM: Polyurethanes, uses
Thermosetting plastics
ROLE: MOA (Modifier or additive use); USES (Uses)
(coating on **granular pesticide**)
INDEX TERM: Polyoxyalkylenes, uses
ROLE: MOA (Modifier or additive use); USES (Uses)
(polyol derivs., reaction products with tris(dimethylaminomethyl)phenol; coating on **granular pesticide**)
INDEX TERM: 123572-88-3, Furametpyr
ROLE: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(**coated granular** formulation of)
INDEX TERM: 90-72-2D, 2,4,6-Tris(dimethylaminomethyl)phenol, reaction products with Polypropylene glycol polyol derivs.
25322-69-4D, Polypropylene glycol, polyol derivs., reaction products with tris(dimethylaminomethyl)phenol
ROLE: MOA (Modifier or additive use); USES (Uses)
(coating on **granular pesticide**)

L5 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1998:360972 CAPLUS
DOCUMENT NUMBER: 129:67329
TITLE: Controlled-release **pesticide**-containing fertilizer **granules coated** with **thermosetting** resins
INVENTOR(S): Nakamura, Hiroshi; Okada, Shoji; Imai, Masayoshi
PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
INT. PATENT CLASSIF.:
MAIN: C05G003-00
SECONDARY: C05G003-02
CLASSIFICATION: 19-6 (Fertilizers, Soils, and Plant Nutrition)
Section cross-reference(s): 5
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10152387	A2	19980609	JP 1996-306589	19961118

ABSTRACT:
Title **granules** are **coated** with materials mainly contg. ***thermosetting*** resins. The **granules** may have an undercoat layer contg. water-sol. substances or water-insol. or slightly sol. powders. ***Granules*** contg. fertilizer and uniconazole P were **coated** with aq. dispersion of Sanx P 201 and **coated** with a resin compn. comprising Sumidur 44V10 45.2, Sumiphen TM 18.3, Sumiphen 1600U 35.6, Sumicure D 2.0, and Sorpol 8043 1.2 parts. The **coated granules** were poured into H2O to show 30, 74, 96, and 98% fertilizer release after 7, 14, 30, and 90 days, resp.

SUPPL. TERM: fertilizer **pesticide granule** **thermosetting** resin coating; polyurethane coating
fertilizer **pesticide granule**; controlled release fertilizer **pesticide granule**

INDEX TERM: Anionic surfactants
Nonionic surfactants
(controlled-release **pesticide**-contg. fertilizer **granules coated** with **thermosetting** resins)

INDEX TERM: Polyurethanes, biological studies
Thermosetting plastics
ROLE: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(controlled-release **pesticide**-contg. fertilizer **granules coated** with **thermosetting** resins)

INDEX TERM: Fertilizers
ROLE: AGR (Agricultural use); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process); USES (Uses)
(controlled-release **pesticide**-contg. fertilizer **granules coated** with **thermosetting** resins)

INDEX TERM: Agrochemical formulations
(controlled-release; controlled-release **pesticide** -contg. fertilizer **granules coated** with **thermosetting** resins)

INDEX TERM: Clays, biological studies
ROLE: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(pyrophyllitic; controlled-release **pesticide**

-contg. fertilizer **granules coated** with **thermosetting** resins)

INDEX TERM: 12269-78-2, Pyrophyllite 83657-17-4, Uniconazole P 198131-56-5
ROLE: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(controlled-release **pesticide**-contg. fertilizer **granules coated** with **thermosetting** resins)

INDEX TERM: 144377-93-5, Sorpol 8043
ROLE: AGR (Agricultural use); MOA (Modifier or additive use); BIOL (Biological study); USES (Uses)
(surfactant; controlled-release **pesticide**-contg. fertilizer **granules coated** with **thermosetting** resins)

INDEX TERM: 8061-52-7, Sanx P 201 104922-10-3, Gohsenol GL 05
ROLE: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(undercoat; controlled-release **pesticide**-contg. fertilizer **granules coated** with **thermosetting** resins)

L5 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1997:664187 CAPLUS
DOCUMENT NUMBER: 127:345873
TITLE: Controlled-release fertilizer **granules** having **pesticide**-containing coatings
INVENTOR(S): Nakamura, Hiroshi; Okada, Shoji
PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
INT. PATENT CLASSIF.:
MAIN: C05G003-00
SECONDARY: A01N025-10; A01N025-12; A01N025-26; A01N025-30
CLASSIFICATION: 19-6 (Fertilizers, Soils, and Plant Nutrition)
Section cross-reference(s): 5
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09263475	A2	19971007	JP 1996-74475	19960328

ABSTRACT:
Title **granules** comprise fertilizers **coated** with ***thermosetting*** resins contg. **pesticides** and optional anionic and/or nonionic surfactants. Urea **granules** (1 kg) were treated with 80 g resin compn. comprising Sumidur 44V10 45.2, Sumiphen TM 18.3, Sumiphen 1600U 36.6, Sumicure D 2.0, and polyoxyethylene nonylphenyl ether 1.2 parts and
1 g uniconazole P to prep. a **pesticide**-contg. fertilizer. It took 15 days for 80% release of the fertilizer, while 81% of the **pesticide** was released after 14 days.

SUPPL. TERM: fertilizer **pesticide** coating controlled release; **thermosetting** resin coating fertilizer **pesticide**; urea **granule** coating polyurethane uniconazole; surfactant fertilizer **granule pesticide** coating

INDEX TERM: Anionic surfactants
Coatings
Nonionic surfactants
(controlled-release fertilizer **granules coated** with **pesticide**-contg.

thermosetting resins)

INDEX TERM: Polyether-polyurethanes
ROLE: AGR (Agricultural use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
(controlled-release fertilizer **granules** **coated** with **pesticide**-contg. **thermosetting** resins)

INDEX TERM: Fertilizers
ROLE: AGR (Agricultural use); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process); USES (Uses)
(controlled-release; controlled-release fertilizer **granules** **coated** with **pesticide** -contg. **thermosetting** resins)

INDEX TERM: 57-13-6, Urea, biological studies 83657-17-4, Uniconazole P
ROLE: AGR (Agricultural use); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process); USES (Uses)
(controlled-release fertilizer **granules** **coated** with **pesticide**-contg. **thermosetting** resins)

INDEX TERM: 198131-56-5P
ROLE: AGR (Agricultural use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
(controlled-release fertilizer **granules** **coated** with **pesticide**-contg. **thermosetting** resins)

INDEX TERM: 9016-45-9, Polyoxyethylene nonylphenyl ether
ROLE: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(surfactant; controlled-release fertilizer **granules** **coated** with **pesticide** -contg. **thermosetting** resins)

L5 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1970:30748 CAPLUS
DOCUMENT NUMBER: 72:30748
TITLE: Plural **coated** [fertilizer] pellet form products
INVENTOR(S): Kato, Haruhiro
PATENT ASSIGNEE(S): Dai-Nippon Toryo K. K.
SOURCE: U.S., 10 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
INT. PATENT CLASSIF.: B44D
US PATENT CLASSIF.: 071064000
CLASSIFICATION: 20 (Fertilizers, Soils, and Plant Nutrition)
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3475154	A	19691028	US 1965-510572	19651130
PRIORITY APPLN. INFO.:			JP 1964-66982	19641130

ABSTRACT:
Low water soly. pellet products were prepd. by coating the pellets with heated, softened liqs. contg. thermoplastic resins (I) and **thermosetting** resins (II); then the hot, soft pellets were covered with a powd. I or II, whose **particle** size was smaller than that of the pellets. The ***coated*** , sepd. pellets were then immersed in a heated liq. contg. I or waxes so that the powd. layer was melted or cured to form a uniform coating, and simultaneously the 3rd layer made of the heated liq. was formed on the

coating. Finally the unsolidified, hot pellets were deposited onto a centrifugal rotary plate to dry and sep. Thus, to 500 g 25% BHC-pellets, 400 g
of Petrosin No. 80 (a petroleu m resin in 75% xylene soln.) was added and completely mixed to coat the su rface of the pellets uniformly. Next 300 g coumarone resin (III) (m. 80-100.degree., 100-200 mesh) was admixed to coat each pellet; the resulting pellets were sepd. individually and recoated with III, and unreacted III was removed by passing through a sieve. The pellets were added to fused paraffin (IV) and the 2nd layer was melted. After further stirring, a IV layer formed on the surface of the pellets. Then the pellets were sepd. from the fused paraffin by filtration, spread on a centrifugal rotor
while still soft, and solidified on cooling; the co atings totalled 18.2%. The
coated pellets were satisfactory in rice field tests. Similar tri-
coated pellets were made using various combinations of the above ingredients and (or) polyol X-450 (a polyester resin), polyurethane resin, Vinylite VYHH (acrylate-vinyl acetate copolymer), polyethylene, saran resin, vinyl acetate-vinyl chloride resin, rosin, Elvax no. 250 (et hylene-vinyl acetate copolymer), Acrose no. 1000 (acrplic nitrocellulose lacquer), alc. phenolic resin, acrylonitrile-butadiene-styrene resin, styrene resin, styrene copolymer resin, alkyd-nitrocellulose lacquer, an aq. MeOH-gelatin soln., paraffin, or fused mixts. of paraffin. Pelletized cryst. (NH4)2SO4 and C6Cl5NO2 were also tested with good results. An upper coating limit of 33% was
reached to give very gradually available, durable pellets. The elutriation rates and results of agricultural tests are given.

SUPPL. TERM: **coated** pellets agricultural; agricultural **coated** pellets; pellets agricultural **coated** ; coumarone resin **coated** pellets; resin **coated** pellets; **granulated coated** fertilizers

INDEX TERM: Gelatin, compounds
ROLE: BIOL (Biological study)
(alkali contg., in **coated** pellets manuf.)

INDEX TERM: **Pesticides**
(coating of)

INDEX TERM: Plant hormones
ROLE: BIOL (Biological study)
(coating of)

INDEX TERM: Rosin
Waxes
Urethane polymers, uses and miscellaneous
ROLE: BIOL (Biological study)
(coating with, of fertilizers and **pesticides**)

INDEX TERM: Paraffins, uses and miscellaneous
ROLE: USES (Uses)
(coating with, of pellets)

INDEX TERM: Fertilizers
ROLE: BIOL (Biological study)
(coatings for **granulated**)

INDEX TERM: Coating materials
(for fertilizers and **pesticides**)

INDEX TERM: Resins
ROLE: BIOL (Biological study)
(petroleum, coating with Petrosin 80, of fertilizers and **pesticides**)

INDEX TERM: Benzofuran, resins
ROLE: BIOL (Biological study)
(coating with, of pellets)

INDEX TERM: 9003-56-9, uses and miscellaneous
ROLE: USES (Uses)
(coating with, of fertilizers and **pesticides**)

INDEX TERM: 58-89-9, uses and miscellaneous 9002-88-4, uses and

miscellaneous 9010-76-8, uses and miscellaneous
24937-78-8, uses and miscellaneous 24980-58-3
24980-58-3, uses and miscellaneous
ROLE: USES (Uses)
(coating with, of pellets)

INDEX TERM: 614-90-4
ROLE: BIOL (Biological study)
(reaction products with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol, as coating for fertilizers and **pesticides**)

INDEX TERM: 77-99-6
ROLE: BIOL (Biological study)
(reaction products with 2-methyl-p-phenylene isocyanate, as coating for fertilizers and **pesticides**)

L5 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1967:492198 CAPLUS
DOCUMENT NUMBER: 67:92198
TITLE: Electrostatic powder application
INVENTOR(S): Barford, John C.; Dias, Peter F.; Glentworth, John D.
PATENT ASSIGNEE(S): Societe Anon. de Machines Electrostatiques (SAMES)
SOURCE: U.S., 4 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
US PATENT CLASSIF.: 117017000
CLASSIFICATION: 47 (Apparatus and Plant Equipment)
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3323933		19670606		
PRIORITY APPLN. INFO.:			GB	19620622

ABSTRACT:
The object to be **coated** is positioned above the powder and held at ground potential so that an elec. field is set up between the rotors charged to a high neg. or pos. potential and the object. The coating powder is mech. dispersed by the rotors. The action of the rotors enables all of the powder to pass through the area of discharge at the edge of the rotor blades, so that the powder **particles** are charged as they are dispersed by the rotors. The charged powder is electrostatically attracted to the object to be ***coated*** . The charged powder is sufficiently adherent to allow the object to be handled and passed into an oven to fuse the powder coating to produce a continuous coating. The object to be **coated** should be a sufficiently good conductor to allow for grounding. Metals are particularly suitable, but other materials such as wood, asbestos, and fabrics, which contain enough moisture to form a satisfactory ground, may be **coated** with an electrostatically charged powder. Thermoplastics and ***thermosetting*** plastics, glass, ceramic material, and other powders such as adhesives, **insecticides**, and fungicides may be applied by this method.

SUPPL. TERM: ELECTROSTATIC POWDER COATINGS; POWDER COATINGS ELECTROSTATIC; COATINGS ELECTROSTATIC POWDER; THERMOPLASTIC ELECTROSTATIC POWDER COATING; GLASS ELECTROSTATIC POWDER COATING; PLASTICS ELECTROSTATIC POWDER COATING; CERAMICS ELECTROSTATIC POWDER COATING

INDEX TERM: Powders
(coating with, electrostatic app. for)

INDEX TERM: Coating process

(electrostatic, app. for, with powder)

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=> d l6 iall 1-14

L6 ANSWER 1 OF 14 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1998:398170 CAPLUS
DOCUMENT NUMBER: 129:64316
TITLE: **Granular pesticidal** composition
INVENTOR(S): Inoue, Masao; Ogawa, Masao; Nakamura, Hiroshi
PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd., Japan
SOURCE: Eur. Pat. Appl., 13 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
INT. PATENT CLASSIF.:
MAIN: A01N025-26
CLASSIFICATION: 5-4 (Agrochemical Bioregulators)
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 847691	A1	19980617	EP 1997-121659	19971209
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 10167904	A2	19980623	JP 1996-330699	19961211

PRIORITY APPLN. INFO.: JP 1996-330699 19961211
ABSTRACT:
This invention relates to a **granular pesticidal** compn. ***coated*** with a thermosetting resin, such as a **polyurethane**. Release of the **pesticidal** active ingredient is controlled by appropriately changing the kind and amt. of a thermosetting resin, depending on the use, and durability of effect of the **pesticidal** active ingredient is shown.

SUPPL. TERM: **coated pesticide granule**
INDEX TERM: **Pesticide** formulations
(**coated granular pesticides**)
INDEX TERM: Polyurethanes, uses
Thermosetting plastics
ROLE: MOA (Modifier or additive use); USES (Uses)
(coating on **granular pesticide**)
INDEX TERM: Polyoxyalkylenes, uses
ROLE: MOA (Modifier or additive use); USES (Uses)
(polyol derivs., reaction products with tris(dimethylaminomethyl)phenol; coating on **granular pesticide**)
INDEX TERM: 123572-88-3, Furametpyr
ROLE: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(**coated granular** formulation of)
INDEX TERM: 90-72-2D, 2,4,6-Tris(dimethylaminomethyl)phenol, reaction products with Polypropylene glycol polyol derivs.
25322-69-4D, Polypropylene glycol, polyol derivs., reaction

products with tris(dimethylaminomethyl)phenol
ROLE: MOA (Modifier or additive use); USES (Uses)
(coating on **granular pesticide**)

L6 ANSWER 2 OF 14 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1998:360972 CAPLUS
DOCUMENT NUMBER: 129:67329
TITLE: Controlled-release **pesticide**-containing fertilizer **granules coated** with thermosetting resins
INVENTOR(S): Nakamura, Hiroshi; Okada, Shoji; Imai, Masayoshi
PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
INT. PATENT CLASSIF.:
MAIN: C05G003-00
SECONDARY: C05G003-02
CLASSIFICATION: 19-6 (Fertilizers, Soils, and Plant Nutrition)
Section cross-reference(s): 5
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10152387	A2	19980609	JP 1996-306589	19961118

ABSTRACT:
Title **granules** are **coated** with materials mainly contg. thermosetting resins. The **granules** may have an undercoat layer contg. water-sol. substances or water-insol. or slightly sol. powders. ***Granules*** contg. fertilizer and uniconazole P were **coated** with aq. dispersion of Sanx P 201 and **coated** with a resin compn. comprising Sumidur 44V10 45.2, Sumiphen TM 18.3, Sumiphen 1600U 35.6, Sumicure D 2.0, and Sorpol 8043 1.2 parts. The **coated granules** were poured into H2O to show 30, 74, 96, and 98% fertilizer release after 7, 14, 30, and 90 days, resp.

SUPPL. TERM: fertilizer **pesticide granule** thermosetting resin coating; **polyurethane** coating fertilizer **pesticide granule**; controlled release fertilizer **pesticide granule**
INDEX TERM: Anionic surfactants
Nonionic surfactants
(controlled-release **pesticide**-contg. fertilizer **granules coated** with thermosetting resins)
INDEX TERM: Polyurethanes, biological studies
Thermosetting plastics
ROLE: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(controlled-release **pesticide**-contg. fertilizer **granules coated** with thermosetting resins)
INDEX TERM: Fertilizers
ROLE: AGR (Agricultural use); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process); USES (Uses)
(controlled-release **pesticide**-contg. fertilizer **granules coated** with thermosetting resins)
INDEX TERM: Agrochemical formulations
(controlled-release; controlled-release **pesticide** -contg. fertilizer **granules coated**

with thermosetting resins)

INDEX TERM: Clays, biological studies
ROLE: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(pyrophyllitic; controlled-release **pesticide** -contg. fertilizer **granules coated** with thermosetting resins)

INDEX TERM: 12269-78-2, Pyrophyllite 83657-17-4, Uniconazole P 198131-56-5
ROLE: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(controlled-release **pesticide**-contg. fertilizer **granules coated** with thermosetting resins)

INDEX TERM: 144377-93-5, Sorpol 8043
ROLE: AGR (Agricultural use); MOA (Modifier or additive use); BIOL (Biological study); USES (Uses)
(surfactant; controlled-release **pesticide** -contg. fertilizer **granules coated** with thermosetting resins)

INDEX TERM: 8061-52-7, Sanx P 201 104922-10-3, Gohsenol GL 05
ROLE: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(undercoat; controlled-release **pesticide**-contg. fertilizer **granules coated** with thermosetting resins)

L6 ANSWER 3 OF 14 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1997:664187 CAPLUS
DOCUMENT NUMBER: 127:345873
TITLE: Controlled-release fertilizer **granules** having **pesticide**-containing coatings
INVENTOR(S): Nakamura, Hiroshi; Okada, Shoji
PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
INT. PATENT CLASSIF.:
MAIN: C05G003-00
SECONDARY: A01N025-10; A01N025-12; A01N025-26; A01N025-30
CLASSIFICATION: 19-6 (Fertilizers, Soils, and Plant Nutrition)
Section cross-reference(s): 5
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09263475	A2	19971007	JP 1996-74475	19960328

ABSTRACT:
Title **granules** comprise fertilizers **coated** with thermosetting resins contg. **pesticides** and optional anionic and/or nonionic surfactants. Urea **granules** (1 kg) were treated with 80 g resin compn. comprising Sumidur 44V10 45.2, Sumiphen TM 18.3, Sumiphen 1600U 36.6, Sumicure D 2.0, and polyoxyethylene nonylphenyl ether 1.2 parts and 1 g uniconazole P to prep. a **pesticide**-contg. fertilizer. It took 15 days for 80% release of the fertilizer, while 81% of the **pesticide** was released after 14 days.

SUPPL. TERM: fertilizer **pesticide** coating controlled release; thermosetting resin coating fertilizer **pesticide**; urea **granule** coating **polyurethane** uniconazole; surfactant fertilizer **granule** **pesticide** coating

INDEX TERM: Anionic surfactants

Coatings
Nonionic surfactants
(controlled-release fertilizer **granules** **coated** with **pesticide**-contg. thermosetting resins)

INDEX TERM: Polyether-polyurethanes
ROLE: AGR (Agricultural use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
(controlled-release fertilizer **granules** **coated** with **pesticide**-contg. thermosetting resins)

INDEX TERM: Fertilizers
ROLE: AGR (Agricultural use); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process); USES (Uses)
(controlled-release; controlled-release fertilizer **granules** **coated** with **pesticide** -contg. thermosetting resins)

INDEX TERM: 57-13-6, Urea, biological studies 83657-17-4, Uniconazole P
ROLE: AGR (Agricultural use); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process); USES (Uses)
(controlled-release fertilizer **granules** **coated** with **pesticide**-contg. thermosetting resins)

INDEX TERM: 198131-56-5P
ROLE: AGR (Agricultural use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
(controlled-release fertilizer **granules** **coated** with **pesticide**-contg. thermosetting resins)

INDEX TERM: 9016-45-9, Polyoxyethylene nonylphenyl ether
ROLE: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(surfactant; controlled-release fertilizer **granules** **coated** with **pesticide** -contg. thermosetting resins)

L6 ANSWER 4 OF 14 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1996:746258 CAPLUS
DOCUMENT NUMBER: 126:61099
TITLE: **Granular** material- and polymeric binder-containing porous coating material compositions, and walls **coated** with the materials
INVENTOR(S): Sulzer, Hans-Dietrich
PATENT ASSIGNEE(S): Switz.
SOURCE: Ger. Offen., 9 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
INT. PATENT CLASSIF.:
MAIN: C04B020-00
SECONDARY: C04B024-38; C04B014-06; C04B026-06; C04B022-06; C04B014-42; C08L001-22; B32B005-02; B32B018-00; C09D133-04; C09D005-02; C09D007-02
ADDITIONAL: C08L033-00; C08L075-04; C09D175-04; C09D007-12; C09D005-14; C09D005-18
INDEX: C04B103-44
CLASSIFICATION: 38-3 (Plastics Fabrication and Uses)
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

DE 19614296	A1	19961031	DE 1996-19614296	19960411
CH 689510	A	19990531	CH 1996-918	19960410
FR 2733529	A1	19961031	FR 1996-5284	19960426
FR 2733529	B1	19990528		

PRIORITY APPLN. INFO.: DE 1995-19515465 19950427

ABSTRACT:
The compns. contain **granular** material contg. a fine major fraction having **particle** size tolerance .ltoreq.50% 65-98, binder solids 65-98, polysaccharide-type thickener .ltoreq.1, and fines <0.1 mm in the ***granular*** material .ltoreq.10 wt.%. The coating material is applied to a fibrous layer to form the wall for sound insulation. A mixt. consisting of powd. white marble (**particle** size 0.1-0.5, av. 0.3 mm) 850, acrylic resin dispersion (solids content .apprx.50 wt.%) 40, water 150, and xanthogenate 6 g was applied to a glass fiber felt to a thickness of .apprx.3 mm, and allowed to dry.

SUPPL. TERM: **granular** material polymeric binder coating; marble powder acrylic resin binder; sand marble alumina resin binder; **urethane** polymer thickener acrylic resin; Tylose xanthogenate thickener; dispersant cellulose fiber ester coating

INDEX TERM: Acrylic polymers, uses
Polymers, uses
ROLE: TEM (Technical or engineered material use); USES (Uses)
(binders; compns. for sound-insulating porous coating formation contg. **granular** material and thickener and)

INDEX TERM: Sound insulators
(coatings; **granular** material- and polymeric binder- and thickener-contg. compns. for porous sound-insulating coating formation on walls)

INDEX TERM: Electrostatic charge
(compns. for sound-insulating porous coating formation contg. charged **granular** material and polymeric binder and thickener)

INDEX TERM: Thickening agents
(compns. for sound-insulating porous coating formation contg. **granular** material and polymeric binder and)

INDEX TERM: Fireproofing agents
Fungicides
Pesticides
(compns. for sound-insulating porous coating formation contg. **granular** material and polymeric binder and thickener and)

INDEX TERM: Glass fibers, uses
ROLE: TEM (Technical or engineered material use); USES (Uses)
(compns. for sound-insulating porous coating formation contg. **granular** material and polymeric binder and thickener and)

INDEX TERM: **Granular** materials
(compns. for sound-insulating porous coating formation contg. polymeric binder and thickener and)

INDEX TERM: Walls
(**granular** material- and polymeric binder- and thickener-contg. compns. for porous sound-insulating coating formation on)

INDEX TERM: Perlite
ROLE: TEM (Technical or engineered material use); USES (Uses)
(**granulated**; compns. for sound-insulating porous coating formation contg. polymeric binder and

thickener and)

INDEX TERM: Marble
ROLE: TEM (Technical or engineered material use); USES (Uses)
(powd.; compns. for sound-insulating porous coating formation contg. polymeric binder and thickener and)

INDEX TERM: Coatings
(sound insulators; **granular** material- and polymeric binder- and thickener-contg. compns. for porous sound-insulating coating formation on walls)

INDEX TERM: Polysaccharides, uses
ROLE: TEM (Technical or engineered material use); USES (Uses)
(thickeners; compns. for sound-insulating porous coating formation contg. **granular** material and polymeric binder and)

INDEX TERM: 13463-67-7, Titania, uses
ROLE: TEM (Technical or engineered material use); USES (Uses)
(brightener; compns. for sound-insulating porous coating formation contg. **granular** material and polymeric binder and thickener and)

INDEX TERM: 50-78-2, Acetylsalicylic acid
ROLE: MOA (Modifier or additive use); USES (Uses)
(compns. for sound-insulating porous coating formation contg. **granular** material and polymeric binder and thickener and)

INDEX TERM: 1344-28-1, Aluminum oxide (Al2O3), uses
ROLE: TEM (Technical or engineered material use); USES (Uses)
(fireproofing agent; compns. for sound-insulating porous coating formation contg. **granular** material and polymeric binder and thickener and)

INDEX TERM: 14808-60-7, Quartz, uses
ROLE: TEM (Technical or engineered material use); USES (Uses)
(powd.; compns. for sound-insulating porous coating formation contg. polymeric binder and thickener and)

INDEX TERM: 9032-37-5, Cellulose xanthogenate
ROLE: TEM (Technical or engineered material use); USES (Uses)
(thickener; compns. for sound-insulating porous coating formation contg. **granular** material and polymeric binder and)

INDEX TERM: 4741-30-4D, Dithiocarbonic acid, esters and salts
ROLE: TEM (Technical or engineered material use); USES (Uses)
(thickeners; compns. for sound-insulating porous coating formation contg. **granular** material and polymeric binder and)

L6 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1995:753575 CAPLUS
DOCUMENT NUMBER: 123:135868
TITLE: Manufacture of agrochemical **granules** by coating method
INVENTOR(S): Suwa, Norihiro; Shio, Katsuji; Fukushin, Hiroyuki; Nakao, Yoshinobu; Kasai, Yutaka; Yoshida, Tomoko; Baba, Masanori
PATENT ASSIGNEE(S): Nissan Chemical Ind Ltd, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese

INT. PATENT CLASSIF.:
MAIN: A01N043-56
SECONDARY: A01N025-12; A01N025-26
INDEX: A01N043-56, A01N047-24
CLASSIFICATION: 5-1 (Agrochemical Bioregulators)
Section cross-reference(s): 42
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07149606	A2	19950613	JP 1994-241446	19941005
PRIORITY APPLN. INFO.:			JP 1993-250372	19931006

ABSTRACT:
Inert powder is mixed with .gtoreq. 1 agrochem., and **coated** on ***granular*** carrier, using water-insol. thermoplastic resin [e.g. poly(vinyl acetate) and ethylene-vinyl acetate copolymer] suspended in water as
binder. This method requires less coating time and improves productivity as compared to the conventional coating method. The agrochem. may be 5-amino-1-(2,6-dichloro-4-trifluoromethylphenyl)-3-cyano-4-trifluoromethanesulfinylpyrazole and/or Et N-[2,3-dihydro-2,2-dimethylbenzofuran-7-yloxycarbonyl(methyl)aminothio]-N-isopropyl-.beta.-alaninate. A no. of polymeric binders are claimed.

SUPPL. TERM: agrochem **granulation** coating material
INDEX TERM: Siloxanes and Silicones, uses
Urethane polymers, uses
ROLE: NUU (Nonbiological use, unclassified); USES (Uses)
(as binders in manuf. of agrochem. **granules** by coating method)
INDEX TERM: Coating materials
(in manuf. of agrochem. **granules** by coating method)
INDEX TERM: **Pesticides**
(manuf. of agrochem. **granules** by coating method)
INDEX TERM: Fatty acids, uses
ROLE: NUU (Nonbiological use, unclassified); USES (Uses)
(branched, vinyl esters, copolymer with vinyl acetate; as
binder in manuf. of agrochem. **granules** by coating method)
INDEX TERM: 74-85-1D, Ethene, polymers with acrylates 79-10-7D, 2-Propenoic acid, esters, polymers 100-42-5D, polymers with acrylates 108-05-4D, Acetic acid ethenyl ester, copolymer with vinyl versatic acid 9003-20-7, Vinyl acetate polymer 24937-78-8 25085-46-5, Ethylene-vinyl acetate-vinyl chloride copolymer
ROLE: NUU (Nonbiological use, unclassified); USES (Uses)
(as binder in manuf. of agrochem. **granules** by coating method)
INDEX TERM: 9003-54-7, Acrylonitrile-styrene copolymer 9003-55-8
ROLE: NUU (Nonbiological use, unclassified); USES (Uses)
(as binders in manuf. of agrochem. **granules** by coating method)
INDEX TERM: 82560-54-1 120068-37-3
ROLE: BAC (Biological activity or effector, except adverse);
BIOL (Biological study)
(manuf. of agrochem. **granules** by coating method)

L6 ANSWER 6 OF 14 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1994:84968 CAPLUS

DOCUMENT NUMBER: 120:84968
TITLE: Strategies for the simultaneous collection of vapors and aerosols with emphasis on **isocyanate** sampling
AUTHOR(S): Streicher, R. P.; Kennedy, E. R.; Lorberau, C. D.
CORPORATE SOURCE: Cent. Dis. Control Prevent., US Dep. Health and Hum. Serv., Cincinnati, OH, 45226, USA
SOURCE: Analyst (Cambridge, U. K.) (1994), 119(1), 89-97
CODEN: ANALAO; ISSN: 0003-2654
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
CLASSIFICATION: 59-0 (Air Pollution and Industrial Hygiene)
Section cross-reference(s): 79

ABSTRACT:
A review, with 65 refs., is given. Collection of vapor mols. relies on their diffusion to a surface during their residence time in a sampler. Aerosol ***particles*** are most frequently collected by filtration or inertial impaction. If it is necessary to collect both phases simultaneously, a sampler
with 2 stages is generally required. A no. of recent projects at the National Institute for Occupational Safety and Health have dealt with development of sampling and anal. methods for compds. present in workplace air as vapor and aerosol **particles**. One strategy invoked in several instances consisted of a filter for **particle** collection followed by an appropriate 2nd stage for vapor collection. For organophosphorus ***pesticides*** , the 2nd stage was a sorbent tube. For gaseous HF, it was an alk.-impregnated back-up pad. For HCHO, the second stage was an impinger contg. an aq. soln. of Na hydrogensulfite. **Isocyanate** aerosol cannot be collected on a filter because the isocyanates can be lost through reaction with other compds. present in the aerosol **particle** or simultaneously collected on the filter. It is necessary to derivatize the **isocyanate** species rapidly on collection. Filters and sorbents impregnated with derivatizing reagent as well as impingers and bubblers contg. solns. of derivatizing reagent have been used for the collection of **isocyanate** aerosol. Neither filters nor impingers appear to adequately sample for the entire range of **isocyanate** aerosol likely to be encountered in the workplace. The combination of an impinger followed by a reagent-**coated** filter should satisfactorily collect **isocyanate** aerosols and vapors.

SUPPL. TERM: review vapor aerosol analysis workplace air; **isocyanate** sampling workplace air review
INDEX TERM: Aerosols
Fumes
(detn. of, sampling in, of workplace air, strategies for)
INDEX TERM: Sampling
(of vapors and aerosols, in workplace air, strategies for)
INDEX TERM: Air analysis
(vapors and aerosols simultaneous sampling in workplace, strategies for)
INDEX TERM: 661-20-1, **Isocyanate**
ROLE: ANT (Analyte); ANST (Analytical study)
(detn. of, sampling in, of workplace air, strategies for)

L6 ANSWER 7 OF 14 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1992:17204 CAPLUS
DOCUMENT NUMBER: 116:17204
TITLE: Polymer-**coated** controlled-release **pesticides granules**
INVENTOR(S): Tocker, Stanley
PATENT ASSIGNEE(S): du Pont de Nemours, E. I., and Co., USA
SOURCE: PCT Int. Appl., 18 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent
LANGUAGE: English
INT. PATENT CLASSIF.:
MAIN: A01N025-26
INDEX: A01N025-26, A01N025-12
CLASSIFICATION: 5-4 (Agrochemical Bioregulators)
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9110362	A1	19910725	WO 1991-US15	19910108
W: AU, CA, JP, KR, SU, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE				
CA 2073689	AA	19910713	CA 1991-2073689	19910108
AU 9171750	A1	19910805	AU 1991-71750	19910108
EP 513027	A1	19921119	EP 1991-901981	19910108
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
JP 05503697	T2	19930617	JP 1991-502957	19910108
ZA 9100237	A	19920930	ZA 1991-237	19910111
PRIORITY APPLN. INFO.:			US 1990-464434	19900112
			WO 1991-US15	19910108

ABSTRACT:
A **granular** carrier contg. a **pesticide**, and a di- or polyhydroxylated compd. or water is **coated** with a liq. polyisocyanate and a polymn. catalyst, optionally at elevated temps., resulting in interfacial
polymn. to a solid cross-linked **polyurethane** or polyurea barrier. ***Granules*** (9 g) contg. 60% bensulfuron were mixed with 0.3 g propylene glycol and with a soln. of 0.01 g dibutyltin dilaurate in 1 g PAPI 901, to give, after 30 min, a **polyurethane-coated** formulation.

SUPPL. TERM: **pesticide granule polyurethane** polyurea **coated**
INDEX TERM: Polyureas
Urethane polymers, biological studies
ROLE: BIOL (Biological study)
(coating, for sustained-release **pesticide granules**)
INDEX TERM: **Pesticides**
(controlled-release, **polyurethane**- or polyurea-**coated granules**)
INDEX TERM: 9040-19-1 57214-05-8
ROLE: BIOL (Biological study)
(coating, for sustained-release **pesticide granules**)
INDEX TERM: 314-40-9, Bromacil 330-54-1 54593-83-8 99283-01-9, Bensulfuron
ROLE: BIOL (Biological study)
(controlled-release **granules** contg., **polyurethane**- or polyurea-**coated**)

L6 ANSWER 8 OF 14 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1991:138059 CAPLUS
DOCUMENT NUMBER: 114:138059
TITLE: **Granular** formation of liquid **pesticides**
INVENTOR(S): Antfang, Elmar; Kerimis, Dimitrios; Singer, Rolf Juergen
PATENT ASSIGNEE(S): Bayer A.-G., Fed. Rep. Ger.
SOURCE: Eur. Pat. Appl., 6 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
INT. PATENT CLASSIF.:

MAIN: A01N025-10
CLASSIFICATION: 5-4 (Agrochemical Bioregulators)
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 379868	A2	19900801	EP 1990-100191	19900105
EP 379868	A3	19920401		
EP 379868	B1	19931208		
R: BE, CH, DE, DK, ES, FR, GB, IT, LI, NL				
AU 9047651	A1	19900726	AU 1990-47651	19900104
AU 618654	B2	19920102		
US 5047243	A	19910910	US 1990-461208	19900105
ES 2059836	T3	19941116	ES 1990-100191	19900105
JP 02282303	A2	19901119	JP 1990-3692	19900112
ZA 9000322	A	19901031	ZA 1990-322	19900117
PRIORITY APPLN. INFO.:			DE 1989-3901273	19890118

ABSTRACT:
Liq. **pesticides** are **coated** to the surface of nonabsorbend ***granular*** carriers using **polyurethane** binders, optionally contg. other polymers. The resulting **granules** are abrasion resistant. Quartz sand (51.37 kg) was **coated** with 0.192 kg of an aq. dispersion contg. 0.077 kg **polyurethane**, followed by application of 0.577 liq. organophoshorus **pesticide** mixed with 0.578 kg highly-dispersed SiO2. A further coat was applied, consisting of the above mixt. and 0.22 **polyurethane** dispersion. The **granules** were dried at .ltoreq.60.degree.. The **polyurethane** was prepd. from adipic acid and n-butanediol-n-hexanediol, by reaction with **isocyanate**.

SUPPL. TERM: **pesticide granule** nonabsorbent
INDEX TERM: **Urethane** polymers, biological studies
ROLE: BIOL (Biological study)
(binder, for **pesticide granules**)
INDEX TERM: Sand
ROLE: BIOL (Biological study)
(carrier, for **granular pesticide** formulations)
INDEX TERM: **Pesticides**
(formulation of, **granular**)
INDEX TERM: Vinyl compounds, polymers
ROLE: BIOL (Biological study)
(polymers, esters, **polyurethane** binder contg., for **pesticide granules**)
INDEX TERM: 96182-53-5
ROLE: PROC (Process)
(formulation of, **granular**)
INDEX TERM: 79-10-7, 2-Propenoic acid, biological studies 79-10-7D, Acrylic acid, esters, polymers 100-42-5, biological studies 108-05-4D, Acetic acid ethenyl ester, esters 9002-89-5, Poly(vinyl alcohol) 9003-20-7, Poly(vinyl acetate) 9003-39-8, Poly(vinyl pyrrolidone) 24937-78-8 25035-90-9 25085-46-5 25214-15-7
ROLE: BIOL (Biological study)
(**polyurethane** binder contg., for **pesticide granules**)
INDEX TERM: 7631-86-9
ROLE: BIOL (Biological study)
(sand, carrier, for **granular pesticide** formulations)

L6 ANSWER 9 OF 14 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1990:72343 CAPLUS
DOCUMENT NUMBER: 112:72343
TITLE: **Pesticide-coated granules**

as sustained-release formulations.

INVENTOR(S): Hirabayashi, Yoshinori; Goto, Minoru; Sakamoto, Akira
PATENT ASSIGNEE(S): Kumiai Chemical Industry Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF

DOCUMENT TYPE: Patent
LANGUAGE: Japanese
INT. PATENT CLASSIF.:
MAIN: A01N025-12
CLASSIFICATION: 5-6 (Agrochemical Bioregulators)
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 01056601	A2	19890303	JP 1987-213623	19870827
JP 08018925	B4	19960228		

ABSTRACT:
A **pesticidal** compn. is prepd. by coating carrier **granules** with an aq. soln. contg. an **isocyanate** compd. and a polymer (av. mol. wt. .gtoreq. 10,000), followed by a **pesticide**. The **pesticide** is firmly bound to the carrier. It is applied in the field without loss by drifting, and is released from the carrier in a controlled manner. Thus, 93 parts silica sand (16-42 mesh) was mixed with 1 part 20 % aq. poly(vinyl alc.) soln., followed by 1 part PAPI and 5 parts bendiocarb to give ***insecticide*** -**coated granules**.

SUPPL. TERM: **pesticide isocyanate** polymer
coated granule; sustained release
pesticide granule
INDEX TERM: **Pesticides**
(controlled-release, **granules**, **coated**
)
INDEX TERM: 1563-66-2, Carbofuran 2631-40-5, MIPC 22781-23-3, Bendiocarb 58011-68-0, Pyrazolate
ROLE: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BIOL (Biological study); USES (Uses)
(**insecticide**, **granules coated** with)
INDEX TERM: 41814-78-2, Tricyclazole
ROLE: BIOL (Biological study)
(microbicide, **granules coated** with)
INDEX TERM: 101-68-8, Diphenylmethane-4,4'-diisocyanate 822-06-0, Hexamethylene diisocyanate 7373-26-4 9016-87-9, PAPI
ROLE: BIOL (Biological study)
(**pesticide** contg., controlled-release)
INDEX TERM: 9000-01-5, Gum arabic 9002-89-5, Poly(vinyl alcohol) 9004-32-4, Carboxymethyl cellulose
ROLE: BIOL (Biological study)
(**pesticide granules** coating with)

L6 ANSWER 10 OF 14 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1987:555948 CAPLUS
DOCUMENT NUMBER: 107:155948
TITLE: **Particles** containing releasable fill material and method of making same
INVENTOR(S): Matkan, Josef; Treleaven, Richard J.
PATENT ASSIGNEE(S): Minnesota Mining and Mfg. Co., USA
SOURCE: U.S., 6 pp.
CODEN: USXXAM

DOCUMENT TYPE: Patent
LANGUAGE: English
INT. PATENT CLASSIF.:
MAIN: A01N025-28

SECONDARY: B01J013-02; C08G018-82
US PATENT CLASSIF.: 428402210
CLASSIFICATION: 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 37
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4681806	A	19870721	US 1986-829005	19860213

ABSTRACT:
A mixt. of a releasable fill material, an **isocyanate**, and a matrix-forming co-reactant is emulsified in an aq. medium to give spherical droplets, and the **isocyanate** at the surfaces of the droplets hydrolyzes to give a continuous polyurea layer while the **isocyanate** within the droplets hydrolyzes and reacts with the co-reactant to form a polyurea matrix, giving **particles** which retain the fill material during storage and release the fill material in a controlled manner when the polyurea surface is broken. Suitable fill materials are **insecticides**, **herbicides**, perfume oils, dye precursors for manifold copying, adhesives, etc. A soln. comprising crystal violet lactone 2.5, benzoyl leucomethylene blue 0.5, di-Bu phthalate 80, and safflower oil 20 g was mixed with 33 g PAPI (NCO content 31.3%), and the mixt. was emulsified in 5 L H2O contg. 100 g maleic anhydride-styrene copolymer Na salt to give ***particles*** having diam. 1-10 .mu.. The emulsion was stirred 3 h, and the microspheres were sepd. by filtration, dispersed in 1 L 1% aq. poly(vinyl alc.) soln. and **coated** on paper to form a back coating suitable for pressure manifold copying against an acidic front coating.

SUPPL. TERM: **isocyanate** encapsulation fill material; polyurea encapsulation fill material; dye encapsulation copying paper; **insecticide** encapsulation polyurea; **herbicide** encapsulation polyurea; perfume encapsulation polyurea; adhesive encapsulation polyurea; microsphere polyurea encapsulation

INDEX TERM: Encapsulation
(by polyureas, of releasable fill materials)

INDEX TERM: Polyureas
ROLE: USES (Uses)
(encapsulation by, of releasable fill materials)

INDEX TERM: Adhesives
Dyes
Fungicides and Fungistats
Herbicides
Insecticides
Perfumes and Essences
(encapsulation of, by polyureas, for controlled release)

INDEX TERM: Polymerization
(of **isocyanate** in encapsulation of releasable fill materials)

INDEX TERM: Safflower oil
Tung oil
ROLE: USES (Uses)
(polymers with isocyanates, for encapsulation of releasable fill materials)

INDEX TERM: 9016-87-9D, PAPI, polyurea derivs.
ROLE: USES (Uses)
(encapsulation by, of releasable fill materials)

L6 ANSWER 11 OF 14 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1985:162203 CAPLUS
DOCUMENT NUMBER: 102:162203
TITLE: **Granular** agrochemical composition
PATENT ASSIGNEE(S): Kumiai Chemical Industry Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
INT. PATENT CLASSIF.: A01N025-26
CLASSIFICATION: 5-6 (Agrochemical Bioregulators)
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 59206302	A2	19841122	JP 1983-82302	19830511
JP 01004484	B4	19890125		

ABSTRACT:
Granular carriers are **coated** with a compn. contg. agrochems., org. isocyanates, and nonionic surfactants. The product is free from caking and peeling of the active ingredient-contg. coat. Thus, CaCO3 ***granules*** (16-32 mesh) 93.4, water 0.3, and polypropylene glycol (mol. wt. 1000) 0.4 parts were mixed. The **granules** were then ***coated*** with a surfactant compn. contg. moieties of diphenylmethane-4,4'-diisocyanate and diphenylmethane-4-**isocyanate** (92:8) 0.9, naproanilide [52570-16-8] 2, CNP [1836-77-7] 1, Na ligninsulfonate [8061-51-6] 1, and color 1 parts.

SUPPL. TERM: agrochem **granule** coating **isocyanate**
INDEX TERM: Agrochemicals
Pesticides
(controlled-release, **granules**, **isocyanate** coating materials for)
INDEX TERM: 822-06-0 1823-37-6
ROLE: BIOL (Biological study)
(as controlled release agrochem. coating agent)
INDEX TERM: 95973-37-8
ROLE: BIOL (Biological study)
(as controlled-release agrochem. coating agent)
INDEX TERM: 91-08-7D, derivs. 101-68-8D, derivs. 584-84-9D, derivs. 822-06-0D, derivs. 1823-37-6D, derivs. 2761-22-0D, derivs. 7373-26-4D, derivs. 8061-51-6
ROLE: BIOL (Biological study)
(as controlled-release agrochem. coating material)
INDEX TERM: 333-41-5 1836-77-7 6585-53-1 16752-77-5 22248-79-9 22781-23-3 41814-78-2 52570-16-8
ROLE: BIOL (Biological study)
(**granules coated** with compn. contg., as controlled-release **pesticide**)

L6 ANSWER 12 OF 14 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1983:553878 CAPLUS
DOCUMENT NUMBER: 99:153878
TITLE: **Insecticide-coated** fertilizer
INVENTOR(S): Wright, John Francis
PATENT ASSIGNEE(S): FMC Corp. , USA
SOURCE: Pat. Specif. (Aust.), 18 pp.
CODEN: ALXXAP
DOCUMENT TYPE: Patent
LANGUAGE: English
INT. PATENT CLASSIF.: A01N047-18
CLASSIFICATION: 5-4 (Agrochemical Bioregulators)
Section cross-reference(s): 19
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
AU 528086	B2	19830414	AU 1981-76123	19811007

ABSTRACT:
Compns. comprised of a **granular** core contg. at least 1 part nutrient, a water-sol. org. polymer film coating, and at least 1 **pesticide** dispersed in the polymer film are **pesticide**-fertilizer ***granules*** . Thus, in a 2-qt jar were placed 255.6 g of urea fertilizer prills (8-20 mesh) and a soln. of 1.8 g of a benzylic ether phenolic resin and 0.009 g of pyridine as catalyst in 5.7 g of CH2Cl2. The mixt. was shaken for 30 s with subsequent addn. of 1.8 g of arom. polyisocyanate in 5.7 g CH2Cl2. Following a 2nd 30-s agitation, a mixt. of carbofuran [1563-66-2] 4.8 and kaolin clay 24.6 g was added and the contents shaken together for 60 s. The compn. was cured and screened to 20 mesh to provide uniformly **coated** ***granules*** . Similar formulations comprised of 1 and 2% by wt. carbofuran on urea prills at rates of 0.5 and 1.0 kg active ingredient per ha effectively controlled whorl maggots following application to newly-transplanted rice seedlings.

SUPPL. TERM: **insecticide** fertilizer **granule**; **pesticide** fertilizer **granule**
INDEX TERM: **Insecticides**
Pesticides
(fertilizer **granules coated** with)
INDEX TERM: **Urethane** polymers, uses and miscellaneous
ROLE: USES (Uses)
(in fertilizer-**pesticide granule** manuf.)
INDEX TERM: Fertilizers
ROLE: BIOL (Biological study)
(urea, **pesticide-coated**)
INDEX TERM: 1563-66-2
ROLE: BIOL (Biological study)
(fertilizer **granules coated** with)

L6 ANSWER 13 OF 14 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1983:73501 CAPLUS
DOCUMENT NUMBER: 98:73501
TITLE: Laminate
INVENTOR(S): King, David Alan; Bird, Donald
PATENT ASSIGNEE(S): Caligen Foam Ltd., UK
SOURCE: Brit. UK Pat. Appl., 8 pp.
CODEN: BAXXDU
DOCUMENT TYPE: Patent
LANGUAGE: English
INT. PATENT CLASSIF.: B32B005-16; B32B005-18
CLASSIFICATION: 38-2 (Plastics Fabrication and Uses)
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2098541	A	19821124	GB 1981-15271	19810519

ABSTRACT:
Active solid **particles** are uniformly dispersed in a convenient form by laminating them between fused layers of flexible sheet material, one or both of which are preferably open-celled foamed plastics. The solid may be a fabric softener, **insecticide**, **pesticide**, fungicide, fertilizer, drying agent, adsorption medium, weldable material, or air freshening compn. Thus, Anthrasorb CC220 activated carbon **granules** (BS200 mesh) were scattered from a vibrating conveyor onto a continuous sheet of polyester-***polyurethane*** foam 3.0 mm thick (d. 26 kg/m3, 22 cells/cm) moving at 34 m/min, to give carbon coating d. 36 g/m2. The **coated** sheet was fed to a flame laminating machine where the lower surface of a similar foam sheet was melted and pressed onto it by nip rollers with a 1.25 mm gap, forming a

laminate with adhesion 145 g/cm.

SUPPL. TERM: **granular** solid plastic foam laminate; cellular **polyurethane** laminate **granular** solid

INDEX TERM: Adsorbents
Fungicides and Fungistats
(dispersion of, between laminated sheets of cellular plastics)

INDEX TERM: Fertilizers
ROLE: PROC (Process)
(dispersion of, between laminated sheets of cellular plastics)

INDEX TERM: Softening agents
(for textiles, dispersion of, between laminated sheets of cellular plastics)

INDEX TERM: Lamination
(of **granular** solids between cellular polyester-**urethane** sheets)

INDEX TERM: Dispersion
(of solids, in laminated cellular plastic sheets)

INDEX TERM: Adhesives
(hot-melt, for textiles, dispersion of, between laminated sheets of cellular plastics)

INDEX TERM: **Urethane** polymers, uses and miscellaneous
ROLE: TEM (Technical or engineered material use); USES (Uses)
(polyester-, cellular, laminated sheets, contg. dispersed **granular** solids)

INDEX TERM: Polyesters, uses and miscellaneous
ROLE: TEM (Technical or engineered material use); USES (Uses)
(**polyurethane**-, cellular, laminated sheets, contg. dispersed **granular** solids)

INDEX TERM: 9003-22-9
ROLE: TEM (Technical or engineered material use); USES (Uses)
(adhesives, hot-melt, for textiles, plastic foam sheets contg.)

INDEX TERM: 7757-79-1, uses and miscellaneous
ROLE: USES (Uses)
(fertilizers contg., dispersed in laminated plastic foam sheets)

L6 ANSWER 14 OF 14 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1970:30748 CAPLUS
DOCUMENT NUMBER: 72:30748
TITLE: Plural **coated** [fertilizer] pellet form products
INVENTOR(S): Kato, Haruhiro
PATENT ASSIGNEE(S): Dai-Nippon Toryo K. K.
SOURCE: U.S., 10 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
INT. PATENT CLASSIF.: B44D
US PATENT CLASSIF.: 071064000
CLASSIFICATION: 20 (Fertilizers, Soils, and Plant Nutrition)
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

US 3475154 A 19691028 US 1965-510572 19651130
PRIORITY APPLN. INFO.: JP 1964-66982 19641130

ABSTRACT:
Low water soly. pellet products were prepd. by coating the pellets with heated,
softened liqs. contg. thermoplastic resins (I) and thermosetting resins (II); then the hot, soft pellets were covered with a powd. I or II, whose ***particle*** size was smaller than that of the pellets. The **coated**, sepd. pellets were then immersed in a heated liq. contg. I or waxes so that the powd. layer was melted or cured to form a uniform coating, and simultaneously the 3rd layer made of the heated liq. was formed on the coating.
Finally the unsolidified, hot pellets were deposited onto a centrifugal rotary plate to dry and sep. Thus, to 500 g 25% BHC-pellets, 400 g of Petrosin No. 80
(a petroleu m resin in 75% xylene soln.) was added and completely mixed to coat
the su rface of the pellets uniformly. Next 300 g coumarone resin (III) (m. 80-100.degree., 100-200 mesh) was admixed to coat each pellet; the resulting pellets were sepd. individually and recoated with III, and unreacted III was removed by passing through a sieve. The pellets were added to fused paraffin (IV) and the 2nd layer was melted. After further stirring, a IV layer formed on the surface of the pellets. Then the pellets were sepd. from the fused paraffin by filtration, spread on a centrifugal rotor while still soft, and solidified on cooling; the co atings totalled 18.2%. The **coated** pellets were satisfactory in rice field tests. Similar tri-**coated** pellets were made using various combinations of the above ingredients and (or) polyol X-450 (a polyester resin), **polyurethane** resin, Vinylite VYHH (acrylate-vinyl acetate copolymer), polyethylene, saran resin, vinyl acetate-vinyl chloride resin, rosin, Elvax no. 250 (et hylene-vinyl acetate copolymer), Acrose no. 1000 (acrplic nitrocellulose lacquer), alc. phenolic resin, acrylonitrile-butadiene-styrene resin, styrene resin, styrene copolymer resin, alkyd-nitrocellulose lacquer, an aq. MeOH-gelatin soln., paraffin, or fused mixts. of paraffin. Pelletized cryst. (NH4)2SO4 and C6Cl5NO2 were also tested with good results. An upper coating limit of 33% was reached to give very gradually available, durable pellets. The elutriation rates and results of agricultural tests are given.

SUPPL. TERM: **coated** pellets agricultural; agricultural **coated** pellets; pellets agricultural **coated**; coumarone resin **coated** pellets; resin **coated** pellets; **granulated coated** fertilizers

INDEX TERM: Gelatin, compounds
ROLE: BIOL (Biological study)
(alkali contg., in **coated** pellets manuf.)

INDEX TERM: **Pesticides**
(coating of)

INDEX TERM: Plant hormones
ROLE: BIOL (Biological study)
(coating of)

INDEX TERM: Rosin
Waxes
Urethane polymers, uses and miscellaneous
ROLE: BIOL (Biological study)
(coating with, of fertilizers and **pesticides**)

INDEX TERM: Paraffins, uses and miscellaneous
ROLE: USES (Uses)
(coating with, of pellets)

INDEX TERM: Fertilizers
ROLE: BIOL (Biological study)
(coatings for **granulated**)

INDEX TERM: Coating materials
(for fertilizers and **pesticides**)

INDEX TERM: Resins

ROLE: BIOL (Biological study)
(petroleum, coating with Petrosin 80, of fertilizers and **pesticides**)

INDEX TERM: Benzofuran, resins
ROLE: BIOL (Biological study)
(coating with, of pellets)

INDEX TERM: 9003-56-9, uses and miscellaneous
ROLE: USES (Uses)
(coating with, of fertilizers and **pesticides**)

INDEX TERM: 58-89-9, uses and miscellaneous 9002-88-4, uses and miscellaneous 9010-76-8, uses and miscellaneous 24937-78-8, uses and miscellaneous 24980-58-3 24980-58-3, uses and miscellaneous
ROLE: USES (Uses)
(coating with, of pellets)

INDEX TERM: 614-90-4
ROLE: BIOL (Biological study)
(reaction products with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol, as coating for fertilizers and **pesticides**)

INDEX TERM: 77-99-6
ROLE: BIOL (Biological study)
(reaction products with 2-methyl-p-phenylene **isocyanate**, as coating for fertilizers and **pesticides**)

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(FILE 'HOME' ENTERED AT 16:32:53 ON 24 JAN 2000)

FILE 'CAPLUS, CAOLD' ENTERED AT 16:33:12 ON 24 JAN 2000
L1 176476 S PESTICID? OR INSECTICID? OR HERBICID? OR (AGRICULTURAL CHEMIC
L2 876404 S GRANUL? OR PARTICLE?
L3 5958 S L2 AND L1
L4 272 S COATED AND L3
L5 5 S L4 AND THERMOSET?
L6 14 S L4 AND (ISOCYANATE OR URETHANE OR POLYURETHANE)

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COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	84.01	84.16

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-10.57	-10.57

STN INTERNATIONAL LOGOFF AT 16:43:38 ON 24 JAN 2000

DB Name	Query	Hit Count	Set Name
JPAB,EPAB,DWPI	L20 and urethane	20	L24
JPAB,EPAB,DWPI	L21 and thermoset$	9	L23
JPAB,EPAB,DWPI	isocyanate and l21	6	L22
JPAB,EPAB,DWPI	coated and L20	324	L21
JPAB,EPAB,DWPI	l17 and l18	4923	L20
JPAB,EPAB,DWPI	gl17 and l18	0	L19
JPAB,EPAB,DWPI	granul$ or particle$	636946	L18
JPAB,EPAB,DWPI	pesticid$ or insecticid$ or herbicid$ or agrichemical$	83712	L17
USPT	L14 and thermoset$	5	L16
USPT	L14 and isocyanate	9	L15
USPT	L13 and (coated granul$)	125	L14
USPT	L1 and (insecticid$ or pesticid$ or herbicid$ or agrichemical$)	768	L13
USPT	L11 and (urethane or isocyanate)	49	L12
USPT	L10 and resin	73	L11
USPT	L9 and thermoset$	87	L10
USPT	coat$ and L8	5641	L9
USPT	l5 and granul$	13343	L8
USPT	l6 and l4	19	L7
USPT	l5 and L1	762	L6
USPT	pesticid$ or insecticid$ or herbercid$	28824	L5
USPT	L3 and L2	38	L4
USPT	(urethane$ or polyurethane$) and L1	305	L3
USPT	thermoset$ and L1	63	L2
USPT	424/405.ccls. or 424/489.ccls. or 424/490.ccls.	2943	L1